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Author(s): J. ELLIS MOORE

Source: *Canadian Journal of Public Health / Revue Canadienne de Santé Publique*, Vol. 57, No. 3 (MARCH 1966), pp. 126-128

Published by: [Canadian Public Health Association](#)

Stable URL: <http://www.jstor.org/stable/41983856>

Accessed: 07-04-2015 13:22 UTC

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# Accidental Poisonings in the Home<sup>1</sup>

J. ELLIS MOORE,<sup>2</sup> M.B., B.S., D.P.H.

IT was pointed out in the annual report for 1962 of the Dominion Bureau of Statistics that there has been a dramatic decline, in the past generation, in mortality from infectious diseases and some other diseases once considered fatal. This has meant that the category of "Accidents and Violence" has emerged as one of the four major causes of death in all age groups from one year of age upwards. Further, "Accidents and Violence" is now the leading, that is the primary, cause of death in the age groups from one year to 45 years of age. Included in this category of "Accidents and Violence" is accidental poisoning, an occurrence which should be regarded as totally preventable.

Much has been learned about accidental poisoning from the reports of cases made by the poison control and treatment centers established across Canada in 1957. In 1962, 33 tragic deaths from accidental poisoning of healthy young people, with the possibility of a full life before them, occurred in Canada. This figure may not appear impressive until it is related to the morbidity of accidental poisoning. In 1958, the first year the centers were functioning fully, a total of 3,492 cases of accidental poisoning was reported. In 1962, the last year for which complete statistics are available, 17,832 cases, that is approximately five times as many cases, were reported (Table I). This means that for each death there were 540 known cases of accidental poisoning. Obviously, this is not the total picture since many cases were treated by the family physician at home or in hospitals where there was no established poison control and treatment center, hence the cases were not reported.

One could speculate as to whether this figure of 17,832 cases of poisoning in 1962,

which is believed to have doubled during 1965, is due to improved reporting of cases, an increase in the number of potentially poisonous household products coming onto the market, a true increase in the number of poisonings, or a combination of these factors. With regard to the number of products on the market Dr. W. O. Robertson, formerly the director of the poison control center at the Children's Hospital in Columbus, Ohio, stated: "a quarter of a million potentially poisonous household products are up for grabs by the uninhibited fingers of toddlers and preschoolers".

TABLE I—ACCIDENTAL POISONINGS REPORTED TO POISON CONTROL CENTERS IN CANADA AND ONTARIO, 1962

Poison Control Centers—Canada	
All age groups	Number
Drugs	11,360
Household products	5,310
Insecticides	838
Unspecified	324
	17,832
Poison Control Centers—Canada	
0-4-year age group	Number
Drugs	8,655
Household products	4,244
Insecticides and pesticides	650
Unspecified	189
	13,738
Poison Control Centers—Ontario	
All age groups	Number
Drugs	4,052
Household products	1,673
Insecticides and pesticides	300
Unspecified	160
	6,185

From the data that have been processed it is known that all age groups are involved in accidental poisonings in the home. The range extends through:

<sup>1</sup>Presented at the 16th annual meeting of the Ontario Public Health Association held in Toronto, Ontario, September 29, 30, October 1, 1965.

<sup>2</sup>Assistant Director, Maternal and Child Health Branch, Ontario Department of Health, Parliament Buildings, Queen's Park, Toronto, Ontario.

1. The infant under one year of age who cannot walk, or open drawers, but is fed pills by his older sister who loves to play nurse with a real patient.

2. The inquisitive one- to two-year-old toddler who delights in opening the cupboards under the kitchen sink and emptying them. Here so often are stored the lye, the drain cleaners, etc. which can permanently scar and cripple the child.

3. The adventurous three-year-old, to whom any cupboard, apparently out of reach, like the medicine cabinet over the wash basin in the bathroom, the dark cupboards in the basement with the paint cleaners, kerosene, and pesticides stored in them and the strange tins in the garage, containing antifreeze and motor oil, are all challenges which must be met and sampled.

4. The enthusiastic and able housewife who fearlessly mixes chemical cleaners and bleach or cleans with carbon tetrachloride in a closed room, ignoring all the specific warnings on the labels.

5. The mature 60-70-year-old person, mentally and physically alert, who, in the dead of night, reaches out in the dark and grasps the medicine to relieve the breathlessness, sleeplessness, indigestion, chest pain, or the troublesome cough, only to find the wrong product has been taken and help must be sought.

While it is true that all age groups are involved, statistics show that more than three-quarters (77%) of all accidental poisonings occur in the boisterous, rollicking, adventurous under-four-year-olds, with the largest number of cases in the one and a half to two and a half year age group.

The types of products involved are arbitrarily classified into three groups, although this is sometimes difficult to carry out, especially with such articles as cigarette butts which have, unfortunately, been eaten with serious results.

1. Patent medicines and drugs are responsible for 65% of all poisonings reported. Acetyl salicylic acid and its paediatric, candy flavoured preparations are most commonly involved. This substance is readily available in most homes and is regarded as a safe, harmless cure for the mild headache or minor muscle or joint pain, or a temperature. However, it is frequently overlooked that it is a highly dangerous drug if taken in excess either

by an adult or toddler and so is left lying carelessly on the television set, work surface, or bedside table, within reach of the child.

Barbiturates form the second largest group of drug poisonings which is a reflection on the mental—or emotional—health of adults in our province. Chocolate-flavoured laxatives are a popular third group.

It is sad to note the increasing number of children reported as obtaining the very lethal drug, when taken in excess, digitalis. This is usually obtained from grandmother's handbag when she comes to visit and turns a happy reunion into a tragedy.

2. Household products are responsible for 30% of accidental poisonings. The most commonly involved products are bleaches, drain cleaners, lye, furniture polishes and detergents. These can have such serious, long-lasting, and crippling effects on the child that it makes one shudder to see cupboards with these products within reach of unsuspecting toddlers.

The danger of mixing bleach with other household products is often pointed out on the label of such products. Accidents rarely occur, yet two women who were not satisfied with the way the toilet bowl cleaner was dealing with the stains in the bowl added bleach to hasten the process. They stirred the resulting mixture with the toilet bowl brush. One woman died as a result of the poisonous gas chlorine which was liberated and the second, younger, woman recovered only after a period of hospital treatment.

3. Pesticides and insecticides. The use of these products has increased rapidly during the past decade and they were responsible for approximately 5% of accidental poisonings, in 1962. Roses are sprayed, weeds in the lawn are said to be controlled and vermin and pests are exterminated with poisons. Many of these lethal substances are left lying around in the basement or garage and are readily found on the farm. Adults can be seriously affected by these products if they do not follow carefully the instructions given on the label, but the inquisitive two- to three-year-old may well receive the fatal or crippling overdose. Cases of accidental poisoning have been reported with the parathion group and one child died after ingesting two tablets of lindane.

One poison which is not reported through the poison control centers, although it occurs in the home, is carbon monoxide poisoning. Two deaths were reported last summer, when a man and his wife were found dead in their cottage. They had been barbecuing on a charcoal grill and due to the cool summer weather they were cooking indoors with the door and windows closed. They were overcome by the tasteless, odourless poisonous gas. In view of the fact that there is little smoke when cooking with charcoal, people seem unaware of the danger of using a charcoal grill indoors without adequate ventilation.

#### *Preventive measures*

Parents of children under four years of age must be made aware of the possibility of accidental poisoning. They must understand and be encouraged by the fact that this accident-prone period is something the child will grow out of, provided the parents take special precautions at the appropriate time. Thus, they must be reminded of the normal developmental pattern of children. The six- to twelve-month-old baby will put everything in his mouth, regardless of whether it is poisonous or not. The one- to two-year-old will empty cupboards and eat and drink anything available, especially if the kerosene or paint cleaner is stored in the familiar "pop" bottle, and the unpleasant taste will certainly be no deterrent. The normal two- to three-year-old will climb and explore and sample anything new and strange, but by the time the adventurous youngster is in the late three- to four-year age group he will, if he is taught, understand simple safety rules and have enough good sense not to eat everything he comes across in

the home. He is almost through the danger period as far as accidental poisonings are concerned.

While many parents may be ignorant of the dangers of poisoning in the home, some are grimly determined to teach their child to be independent before he is out of the diaper stage. Others are overfearful of dangers that are not constantly present, so that the child becomes overly timid, actively rebellious or just develops a convenient "deaf ear" to the constant stream of warnings.

Thus, the family physician and those in the field of public health have a responsibility to stress, on every possible occasion, the dangers and the preventive measures; i.e., the necessity of storing drugs out of the reach of toddlers, possibly by having a lock placed on the medicine cabinet in the bathroom, with the key out of reach. Architects should be encouraged to install the, supposedly, childproof cabinets in all new homes. Above all, no medicine should be kept in bedside tables. Good house-keeping of household cleaners, polishes, and paint removers means keeping the products in upper cupboards and locking the basement cupboards.

Certainly the attitude of people who say "who can prevent an accident?" must be combatted vigorously. Having done all possible to store the products out of the reach of youngsters, all parents should be prepared, when the occasion demands, to continue the old tried childhood program of saying "No", "Don't do that", "Stop", "Be careful" in fact, all the things which are supposed to scar our ego permanently. It is very much better to go through life with a questionably scarred ego than a very real scarred oesophagus which will require continual dilatation by a physician.